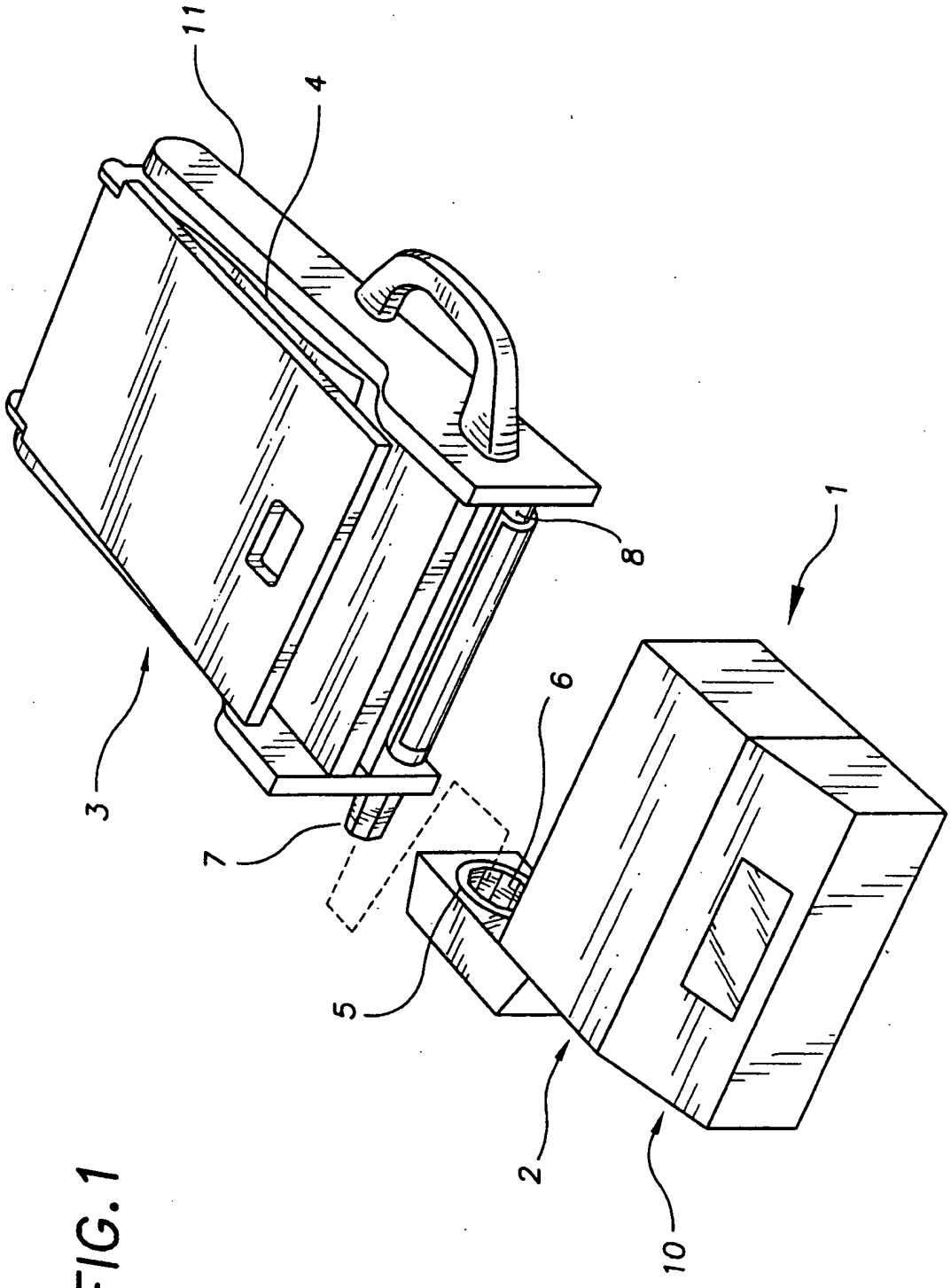


FIG. 1

FIG.2

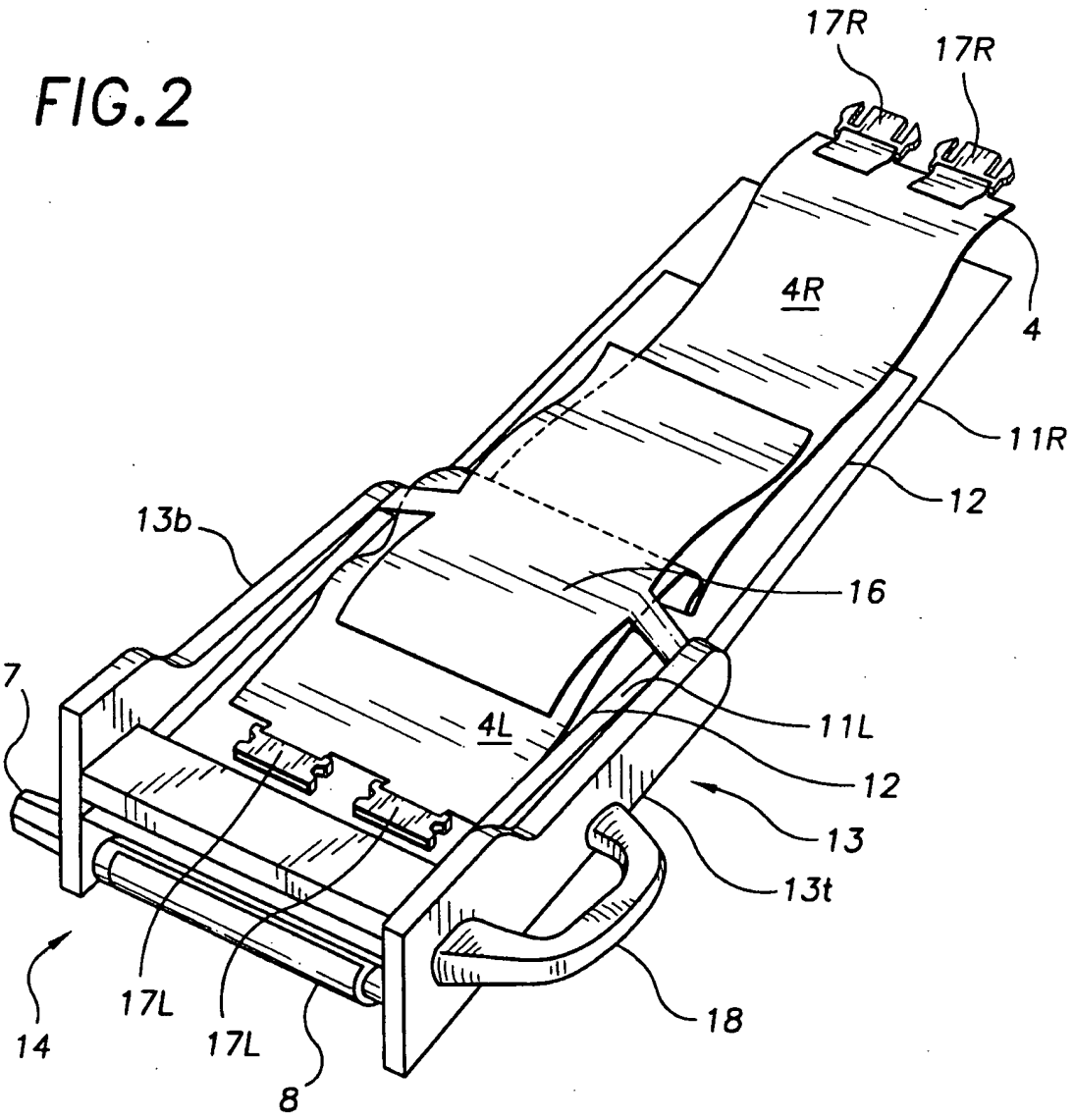


FIG.3

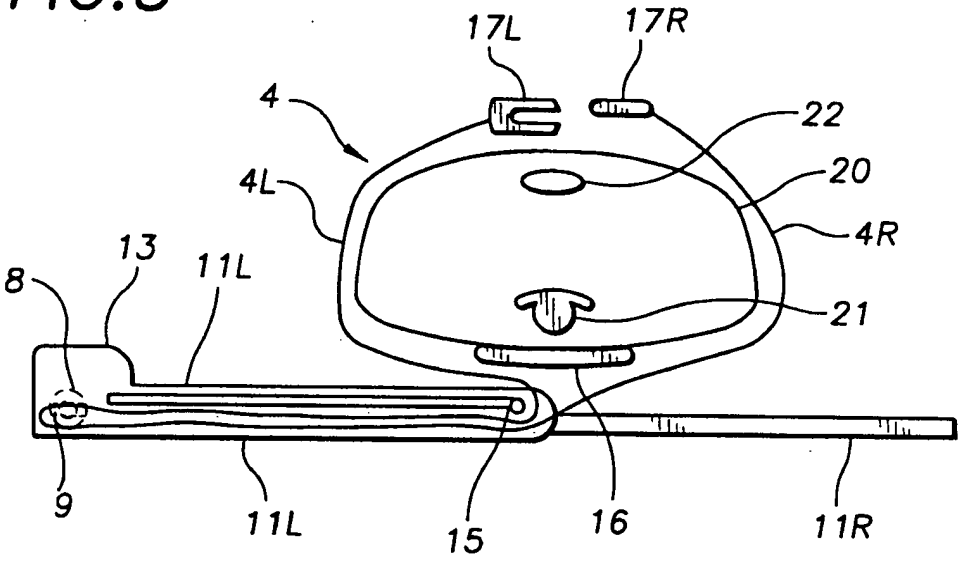

17L
17R
4
22
20
4L
4R
13
11L
8
21
9
11L
15
16
11R

FIG.4

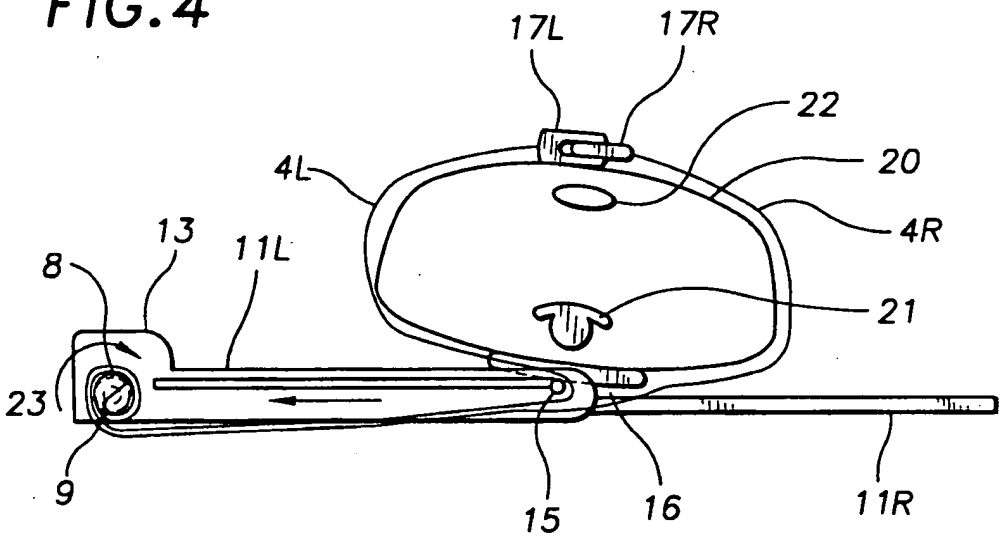

17L
17R
22
20
4L
4R
13
11L
8
21
23
9
15
16
11R

FIG.5

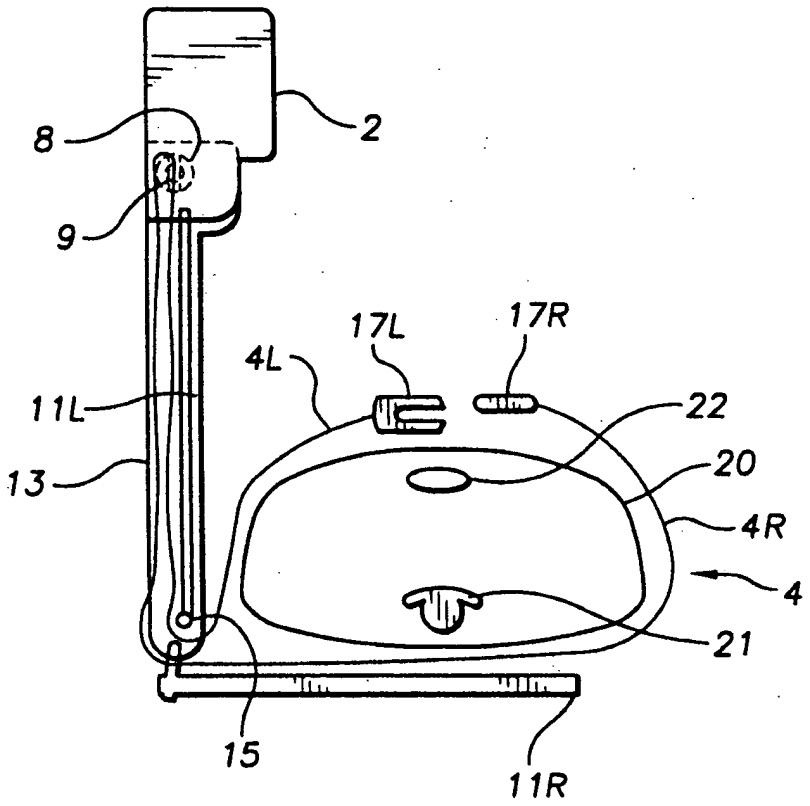

8
2
9
17L
17R
4L
11L
22
13
20
4R
4
21
15
11R

FIG.6

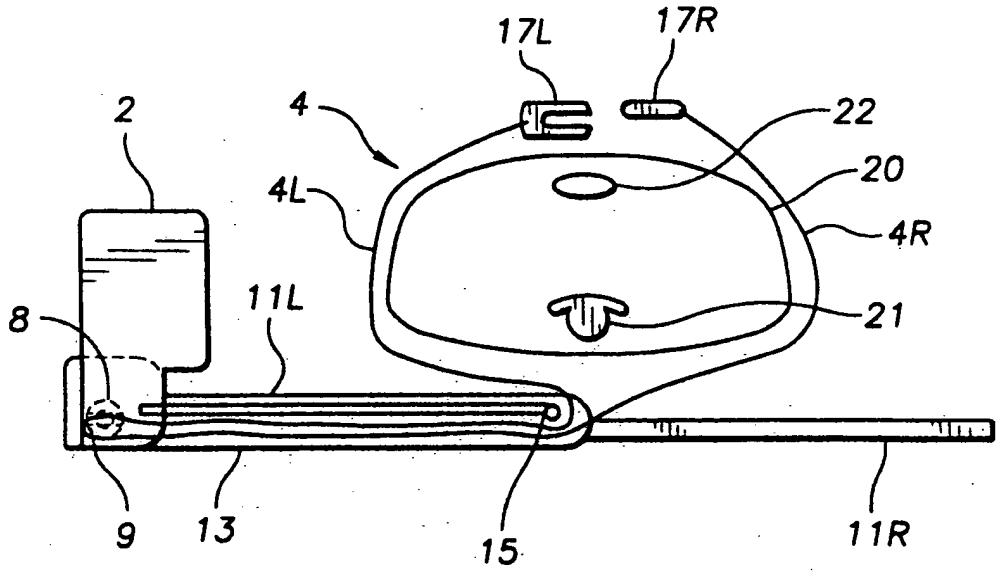

17L
17R
2
4
22
4L
20
4R
8
11L
21
9
13
15
11R

FIG.7

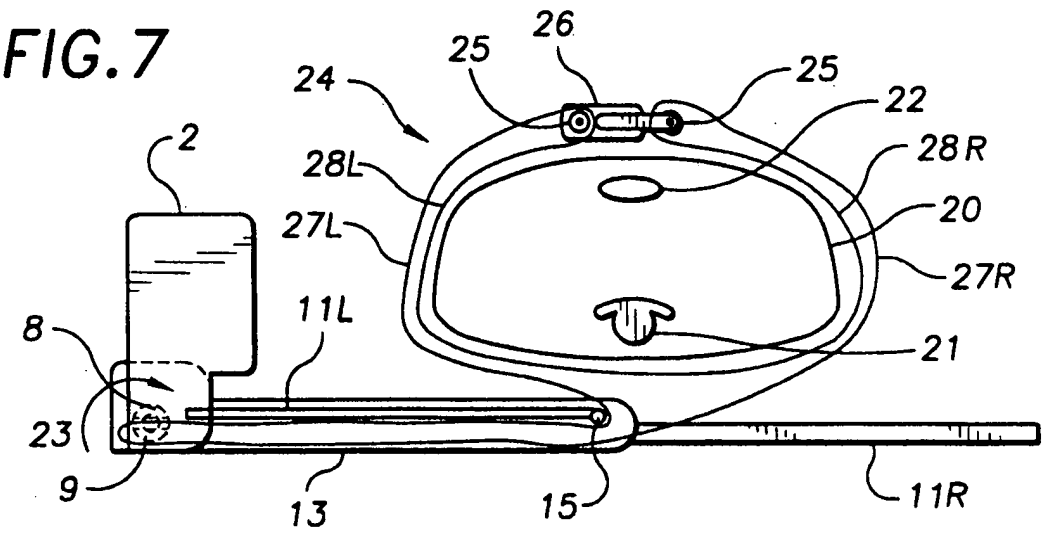


FIG.8

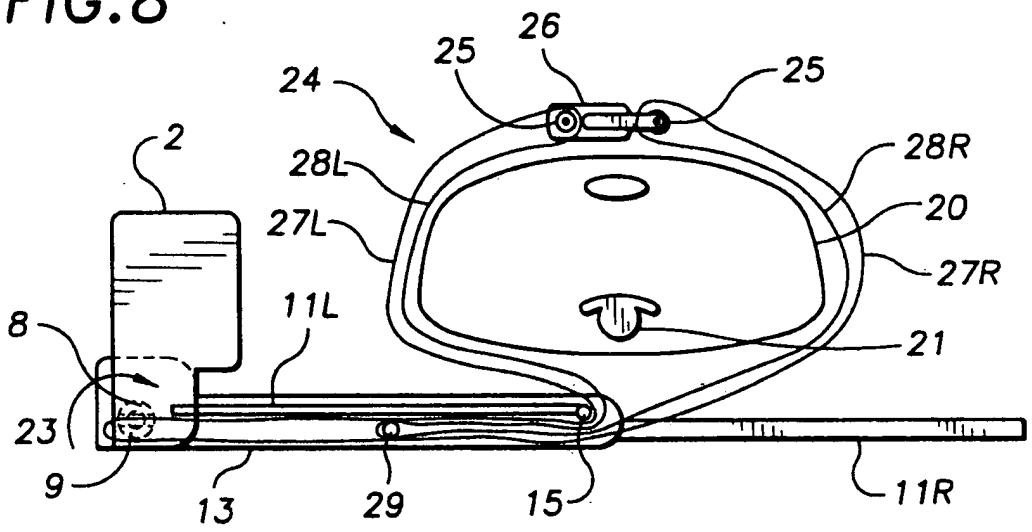


FIG.9

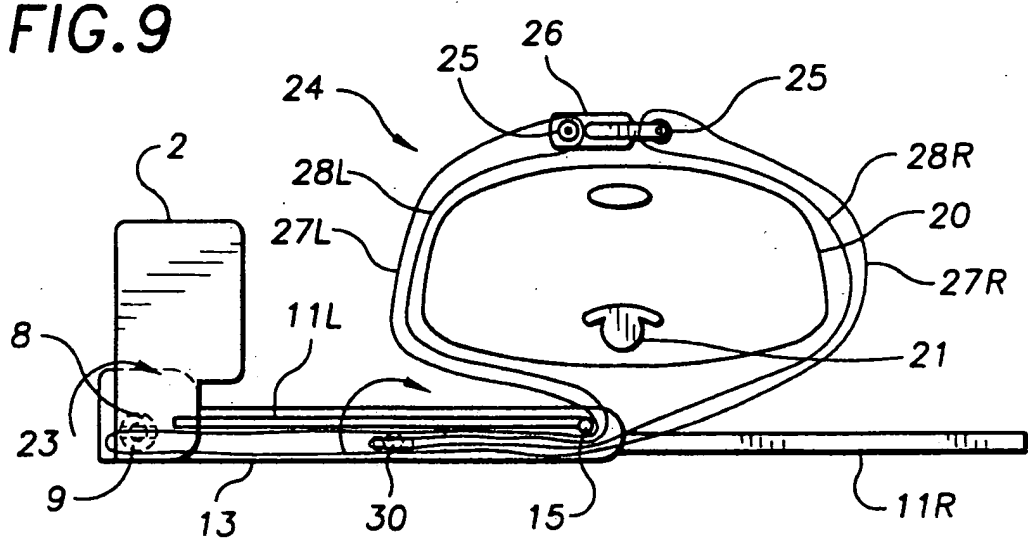


FIG. 10

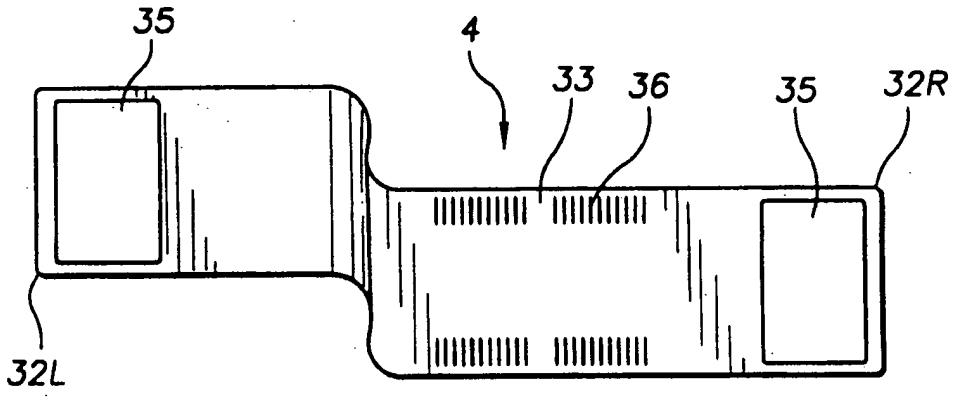
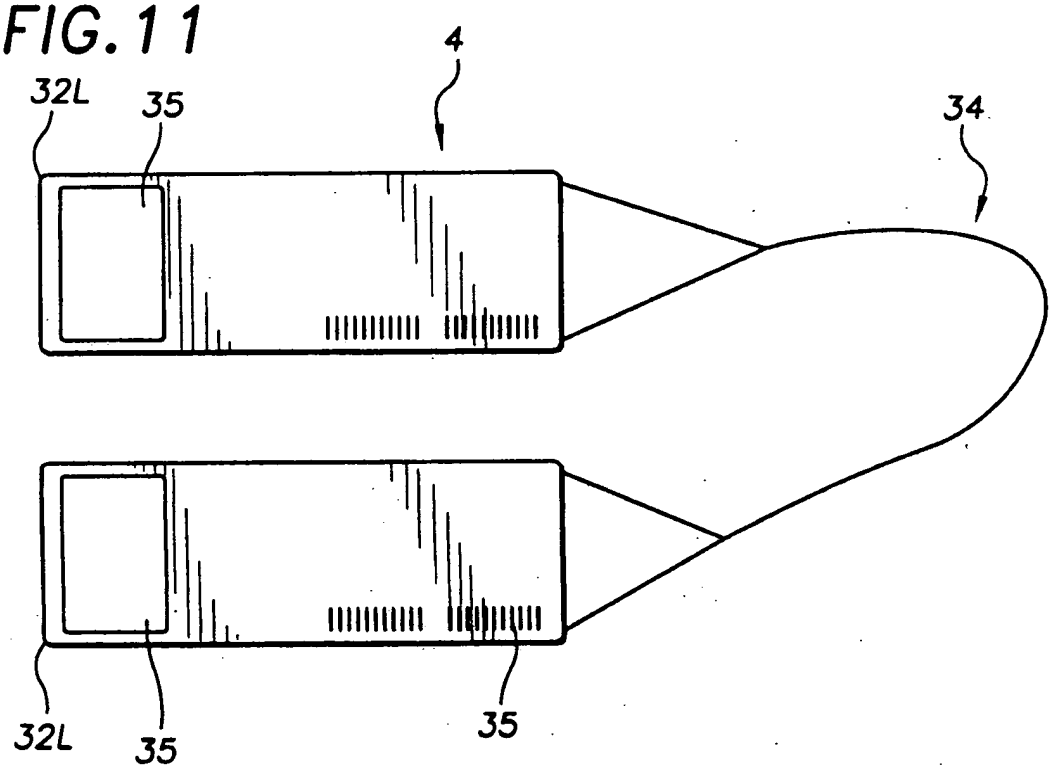


FIG. 11



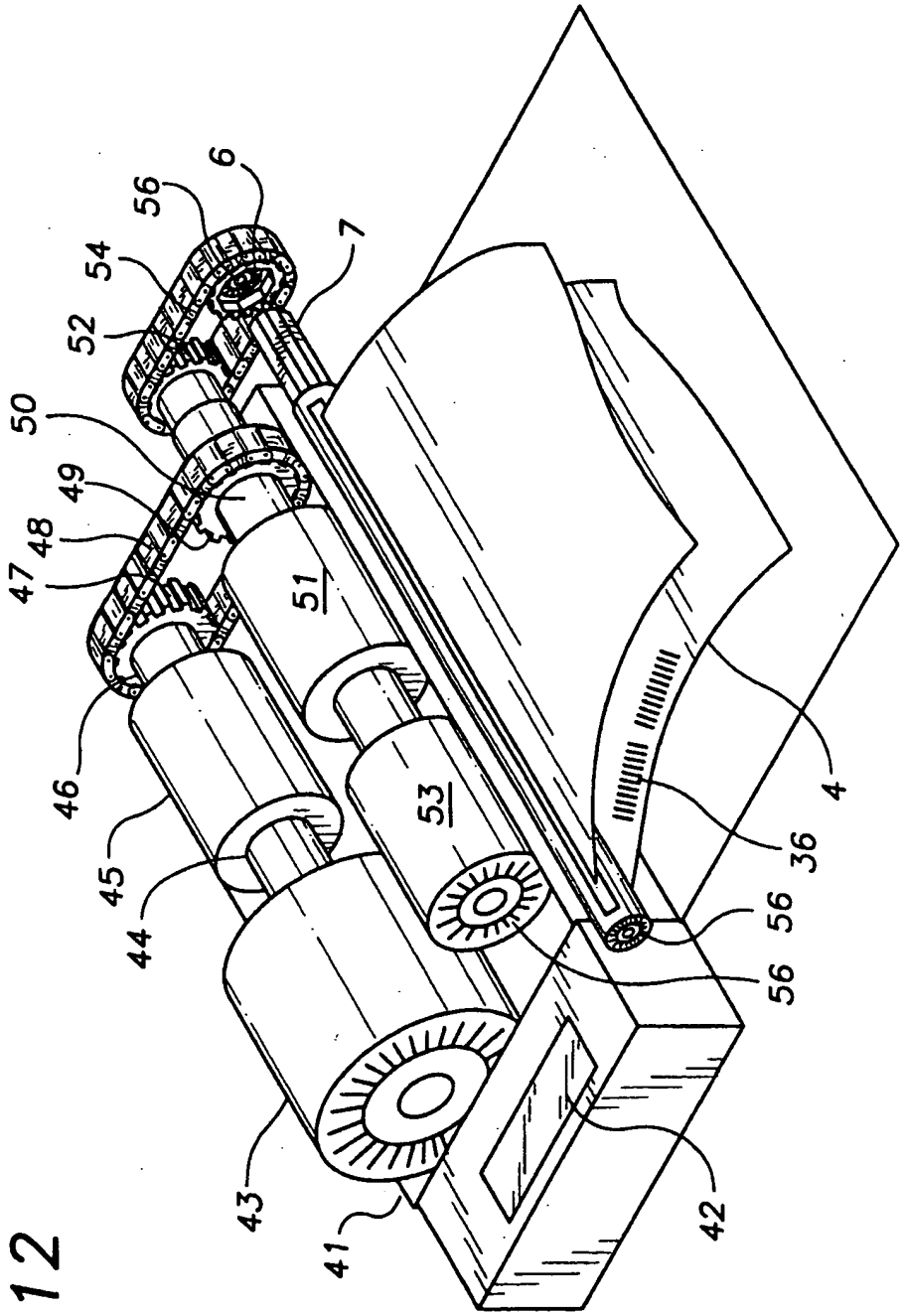


FIG. 12

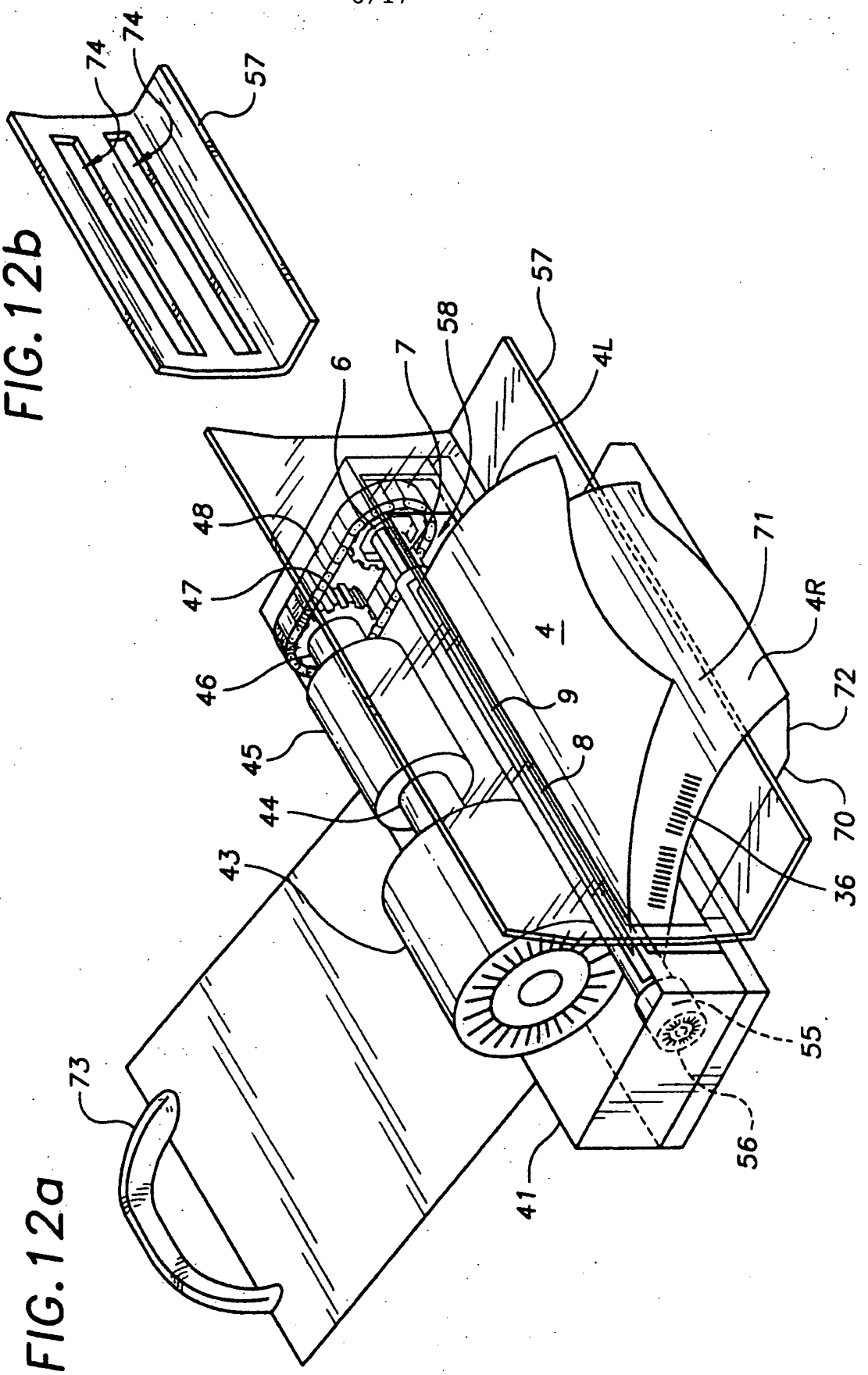


FIG. 12b

FIG. 12a

FIG. 13

TIME	1	2	3	4	5	6	7	8	9	10	11	12
MOTOR	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	OFF
CLUTCH	ON	OFF	ON	OFF	ON(OFF)	OFF	ON	OFF	OFF	OFF	ON	OFF
BRAKE												

FIG. 13a

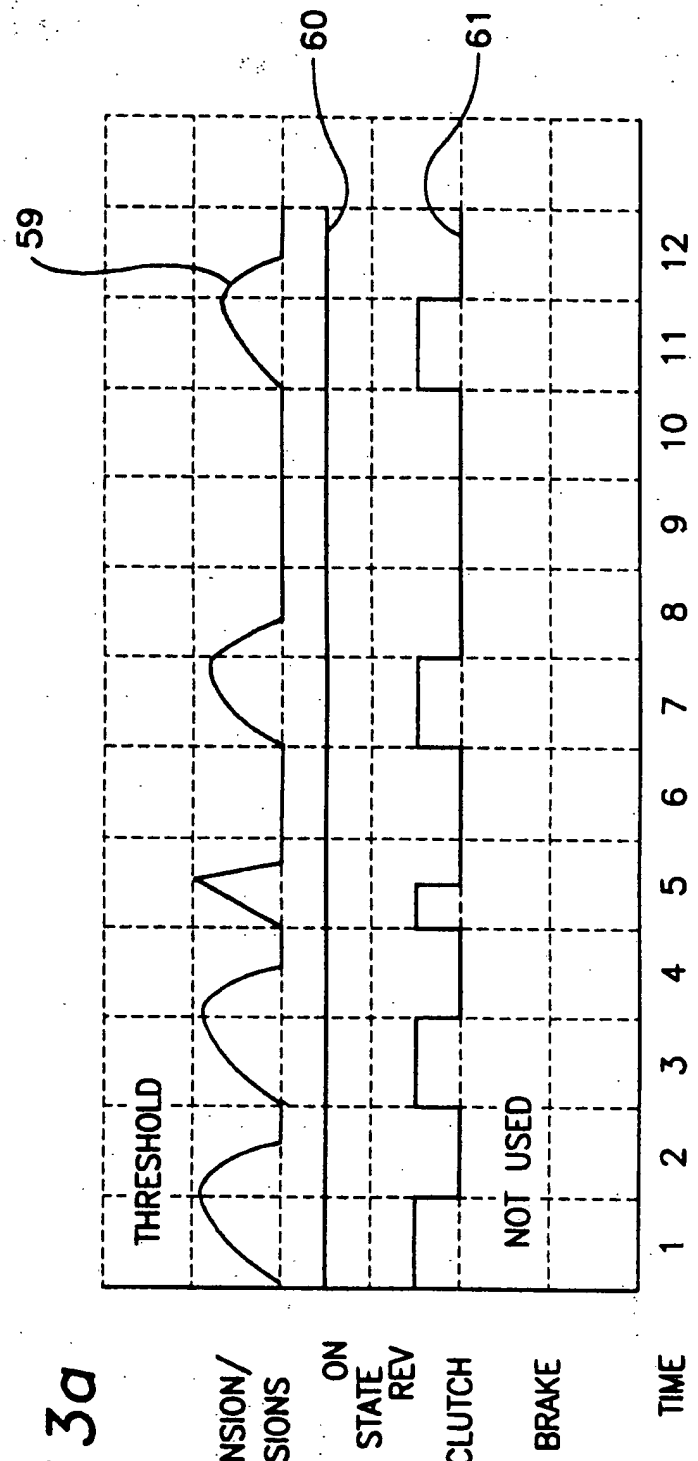


FIG. 14

	1	2	3	4	5	6	7	8	9	10	11	12
MOTOR	FWD	OFF	REV(OFF)	OFF	FWD	OFF	REV(OFF)	REV(OFF)	FWD(OFF)	OFF	REV	OFF
CAM BRAKE	OFF	ON	OFF(ON)	ON	OFF	ON	OFF(ON)	ON	OFF(ON)	ON	OFF	ON
CLUTCH	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

FIG. 14a

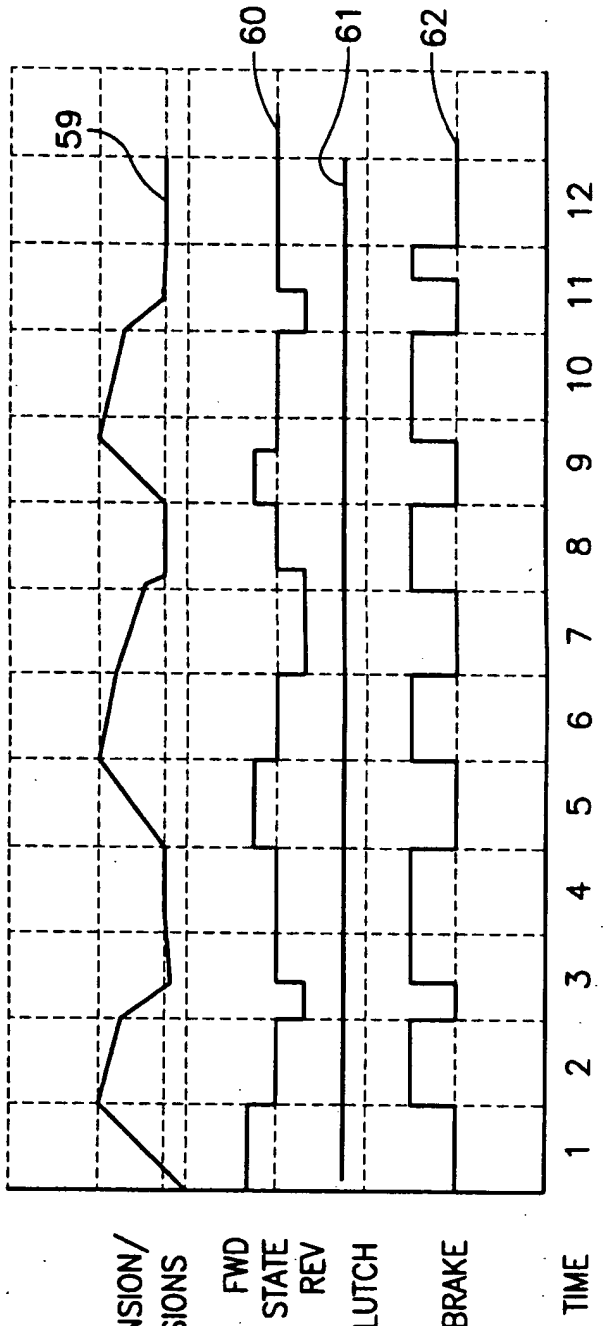


FIG. 15

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13
MOTOR	ON	OFF	ON	ON	ON(OFF)	OFF	ON	ON	ON	ON	ON	ON	ON
CLUTCH	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON
BRAKE	OFF	ON	OFF	OFF	OFF(ON)	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF

FIG. 15a

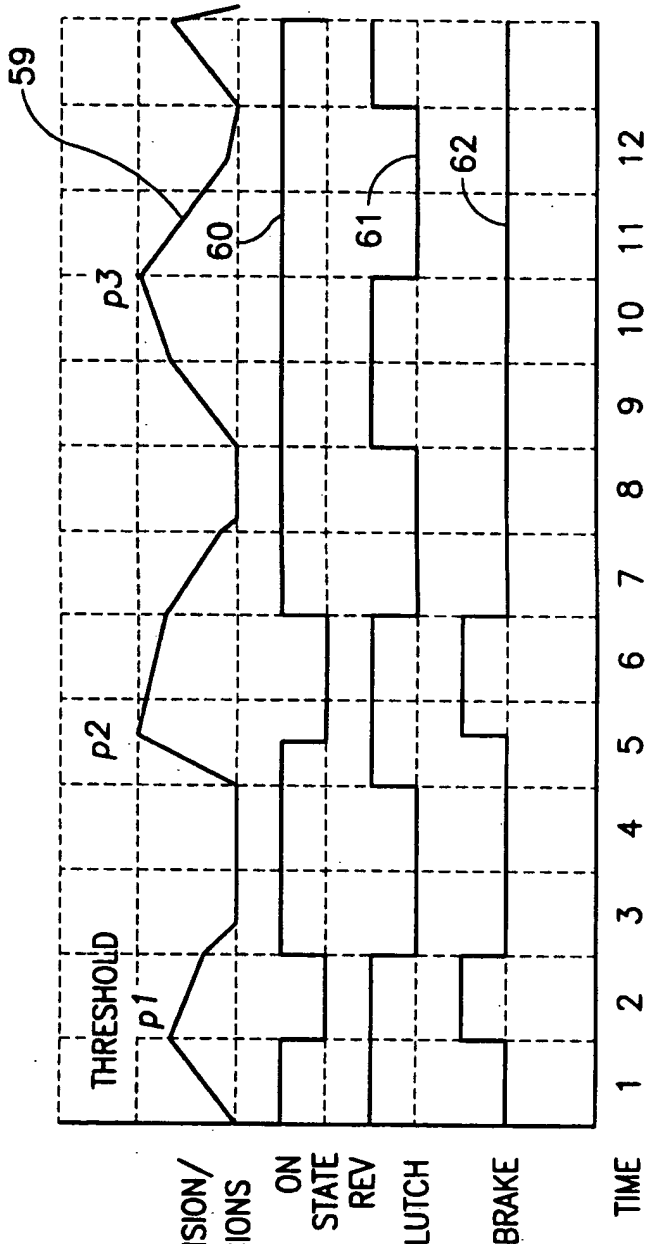


FIG.16

TIME	1	2	3	4	5	6	7	8	9	10	11	12
MOTOR	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	ON	ON
CLUTCH	ON	ON	OFF(ON)	ON	ON	ON	OFF(ON)	ON	ON	ON	OFF	OFF
CAM BRAKE	OFF	ON	ON	ON	OFF	ON	ON	ON	OFF(ON)	OFF(ON)	OFF	OFF

FIG.16a

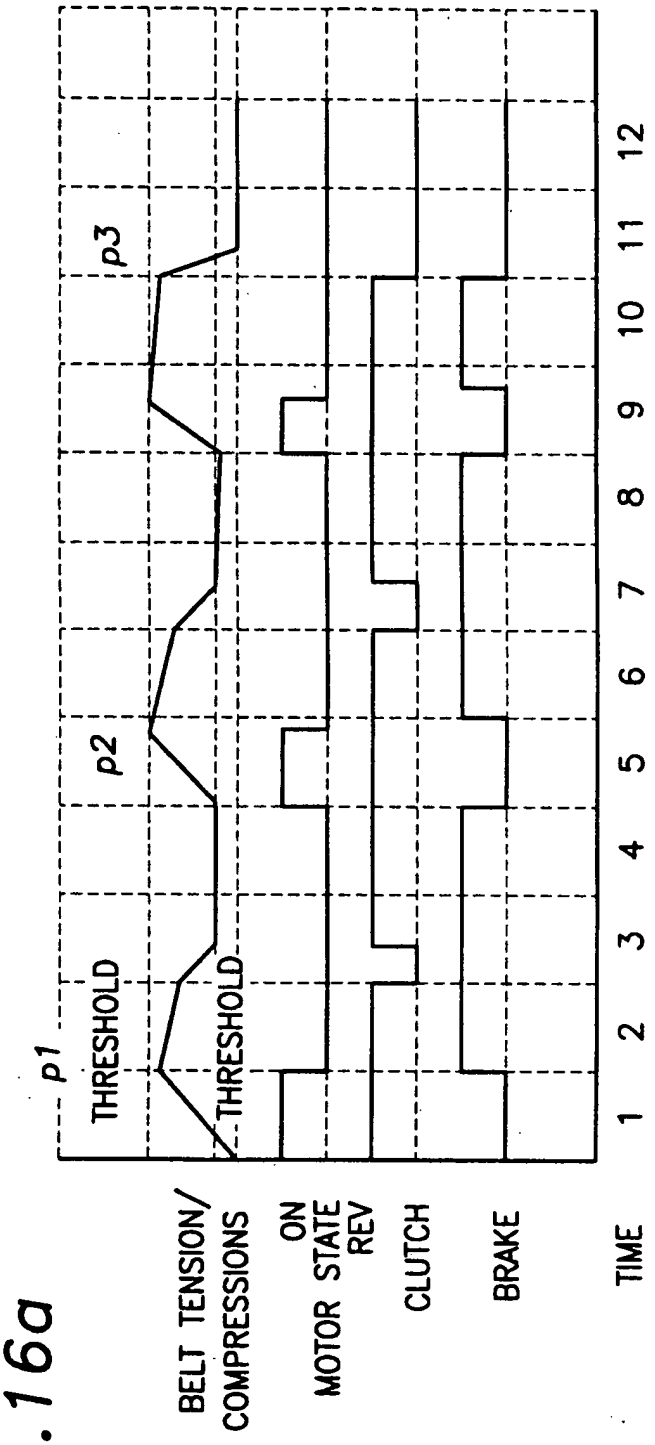


FIG. 17

TIME	1	2	3	4	5	6	7	8	9	10	11	12
MOTOR	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
CLUTCH	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
SPINDLE BRAKE	OFF	ON	OFF(ON)	ON	OFF	ON	OFF(ON)	ON	OFF	OFF	OFF(ON)	ON

FIG. 17a

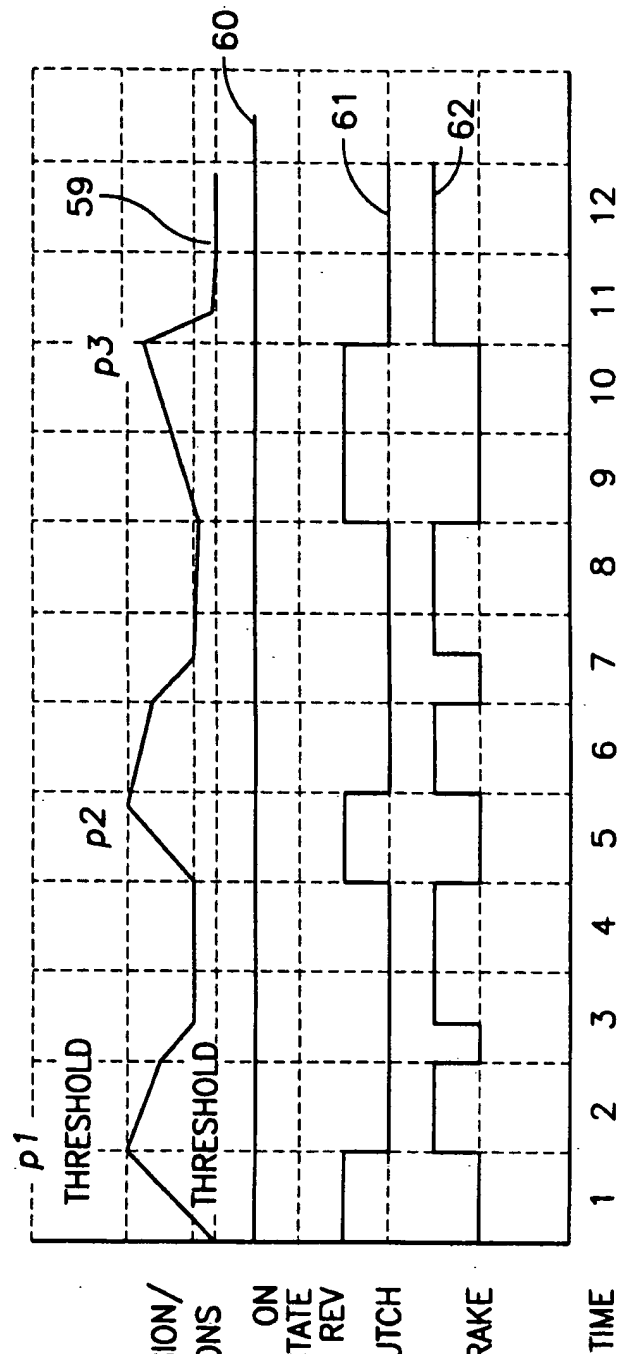


FIG. 18

TIME	1	2	3	4	5	6	7	8	9	10	11	12
MOTOR	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
CLUTCH	ON	OFF	OFF	OFF	ON	ON(OFF)	OFF	OFF	ON	ON(OFF)	OFF	OFF
SPINDLE BRAKE	OFF	OFF	OFF(ON)	ON	OFF	OFF(ON)	OFF(ON)	ON	OFF	OFF(ON)	OFF(ON)	OFF

FIG. 18a

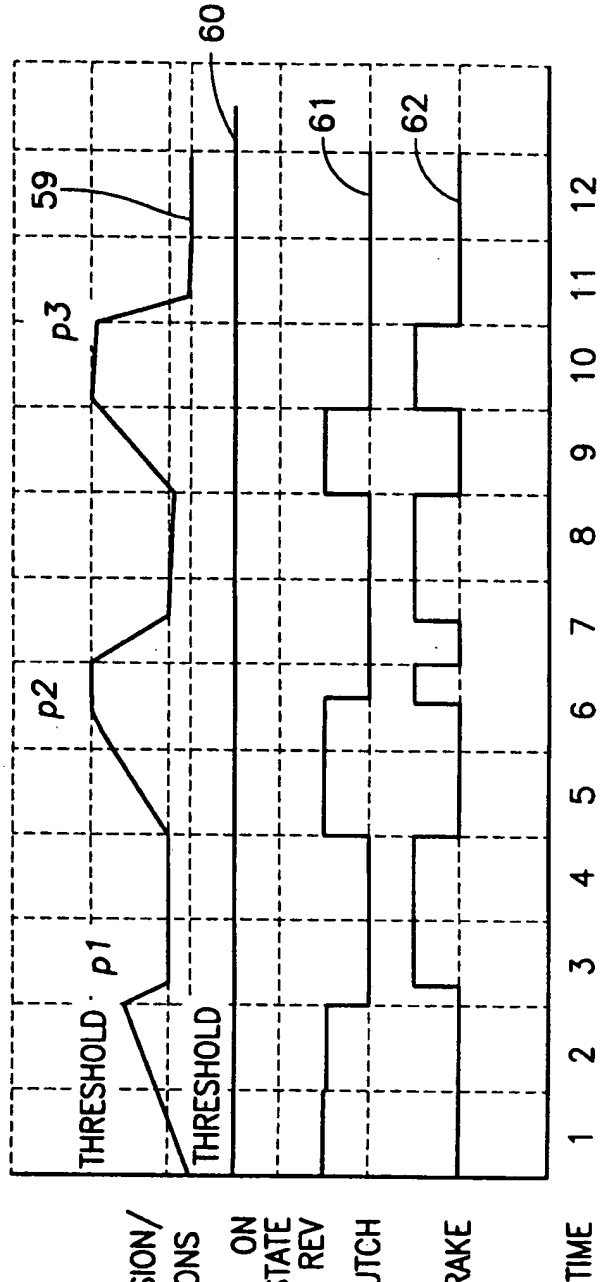


FIG. 19

TIME	1	2	3	4	5	6	7	8	9	10	11	12
MOTOR	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
CLUTCH	ON	OFF	OFF	OFF	ON	ON(OFF)	OFF	OFF	ON	ON	OFF	OFF
BRAKE	OFF	OFF	OFF(ON)	ON	OFF	OFF(ON)	OFF(ON)	ON	OFF	OFF	OFF(ON)	ON

FIG. 19a

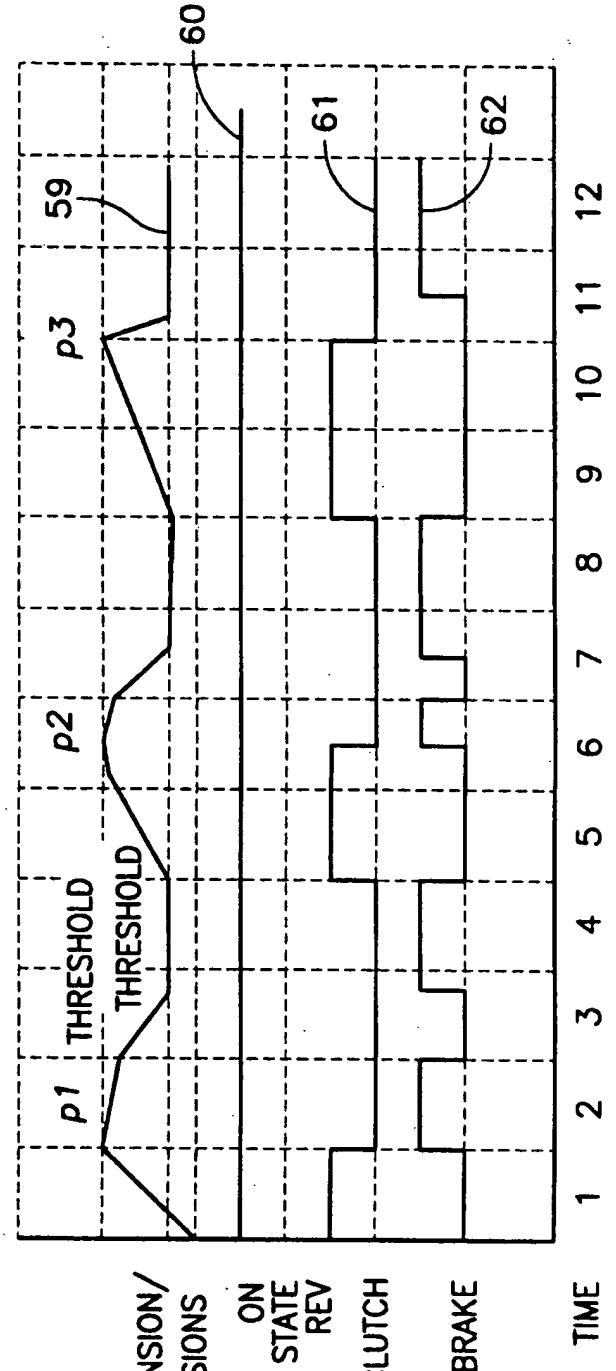


FIG.20

TIME	1	2	3	4	5	6	7	8	9	10	11	12
MOTOR	ON	OFF	ON	ON	ON	OFF	ON	ON	ON	ON	OFF	ON
CLUTCH	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF
BRAKE	OFF	ON	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
SPINDLE BRAKE	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON

FIG.20a

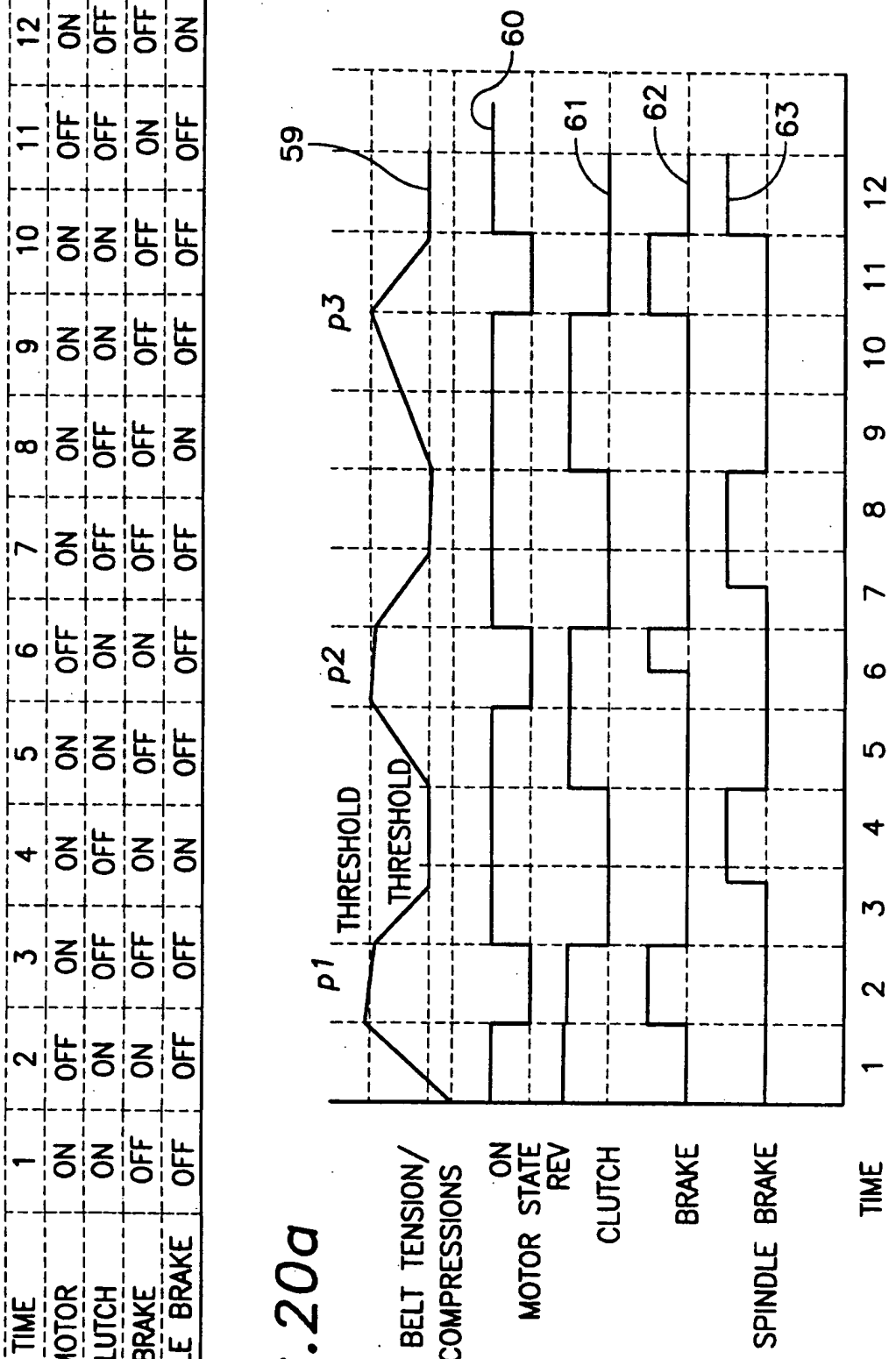


FIG.21

	1	2	3	4	5	6	7	8	9	10	11	12
MOTOR	ON	OFF	ON(OFF)	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
CAM BRAKE	OFF	ON	OFF(ON)	ON	OFF	ON	OFF(ON)	ON	OFF(ON)	ON	OFF	ON
CLUTCH	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

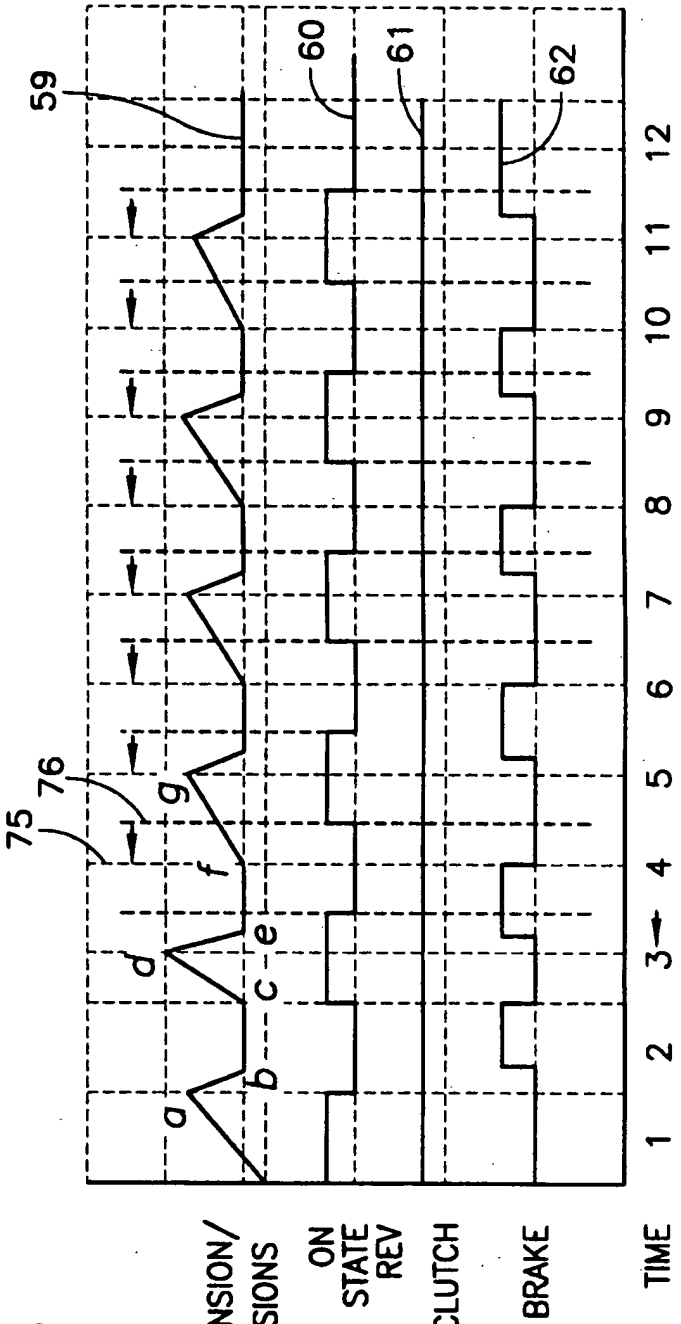



FIG.21a